

# Training Syllabus



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# Science On a Sphere Training Syllabus

*\*Note that **Overview and Basic System Use** is a prerequisite to the session on **Content Creation**.*

During the setup week for the sphere, NOAA provides Science On a Sphere system training. SOS system training consists of five different kinds of sessions. There is some overlap between each of the session. Each session lasts anywhere from one to two hours.

Training is divided into five sessions, with some overlap between the sessions. Each session is anywhere from one to two hours with variable class sizes. There is some overlap in material between each session. All sessions are taught using the actual sphere systems (limited hands-on), so that classes can not be taught in parallel. Class sizes are variable depending on the interest and usually start by the third day of the setup and wrap up by the end of the fourth day.

## Projector Alignment

Projector alignment is usually the first session given. It is the first session, because projector alignment is typically given during the setup and finishes up as the last phase of the sphere installation. This usually occurs during the first two days of setup. Typically, the site personnel who are responsible for projector alignment are also involved with the SOS setup. Alignment training usually happens in the afternoon of day two of the SOS setup.

What is alignment training? The SOS system uses four projectors to display data onto the surface of the sphere. The projectors are positioned around the sphere, 90 degrees apart from each other with respect to the center of the sphere. Each projector is responsible for their quadrant of the sphere. Light from adjacent projectors overlap and make an edge. These edges need to align very closely to achieve a single unified, global sphere image. This edge is also called the blending area. We call the process of creating a seamless edge blend: projector alignment. The instructor will lead a group through the steps required to perform the projector alignment.

Summary of **Alignment Training**:

- Lesson on how align projectors and blend projector edges
- Duration of session: 90 to 120 minutes
- Prerequisite: None
- In depth discussion of projector alignment process
- Hands on demonstration and training of alignment process

## Operation and Systems Administration

This session is intended for the Systems Administrators or IT professionals who will be responsible for maintaining the software and hardware for the SOS system. These individuals will be the primary point of contact for system issues, questions, and problem resolution. In this session, we will cover a basic system overview as well as a description of the computer components. We go into a detailed discussion of how the pieces fit together and interact. We allocate plenty of time for questions and answers.

Summary of **Operation and Systems Administration**:

- Discussion of system architecture and system components
- Duration of session: 60 to 120 minutes
- Prerequisite: Helps to have systems administration experience
- Discussion of system configuration

- Discussion of networking topology and configuration
- Discussion of user accounts and SOS software setup
- [Complete Outline](#)

## Presenter Training and Dataset Overview

This session is another general overview of the system through a live presentation of SOS visualizations. A presenter leads an audience through a 20 to 40 minute presentation of SOS material. The goal of this session is to show museum staff how to use SOS as a presentation tool for audiences (field trips, scheduled presentations, etc).

During this presentation, the docent will give an educational overview of a diverse set of SOS visualizations ranging from Earth System data of the ocean to the planets of the solar system.

This is an ideal opportunity for the entire museum staff (floor staff and administration) to see Science On a Sphere in action.

Summary of **Presenter Training**:

- Use SOS to give a docent lead presentation to an audience
- Overview of SOS content library
- [Complete Outline](#)

## Overview and Basic System Use

This session is intended for individuals who will use the system on a daily basis. It is ideal for individuals who are responsible for bringing up the system in the morning and shutting down the system at night. This session also goes deeper into how content is organized, how to use the system to display data, how to create new play lists, how to use the remote control, and how to give presentations. During this session the trainer will provide a broad overview of the scientific data sets that are available on the system.

Summary of **Overview and Basic System Use**:

- Intended audience is for people who use the system in front of audiences
- Prerequisite: None
- Duration of session: 60 to 90 minutes
- All of the basic system usage topics
  - How to start the user interface
  - Play lists and play list editing
  - Data organization
  - Using the remote control
- [Complete Outline](#)

## Content Creation

Content creation is intended for individuals who need to create content for the sphere or for people who will work with others to create sphere content. During this session, the instructor will go into greater detail on how the system interacts with data. There will be discussion on data formats and how best to go about integrating new content onto the sphere. The instructor will show the students the steps required to get their own content onto the sphere. Individuals are encouraged to bring sample content to try out (**NOTE:** Please review the Content Creation Manual to prepare your samples.)

### Summary of **Content Creation**:

- Lesson on how to create new sphere content
- Duration of session: 90 to 120 minutes
- Prerequisite: Must have attended the **Basic System Overview and Use** session
- In depth information about data organization and file formats
- Detailed discussion about play list options
- Adding simple content to the system
- Adding time series content to the system
- [Complete Outline](#)